

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120225\
 Data File : VL043299.D
 Acq On : 02 Dec 2025 15:24
 Operator : SY/MD
 Sample : Q3744-05
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Quant Time: Dec 03 00:07:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

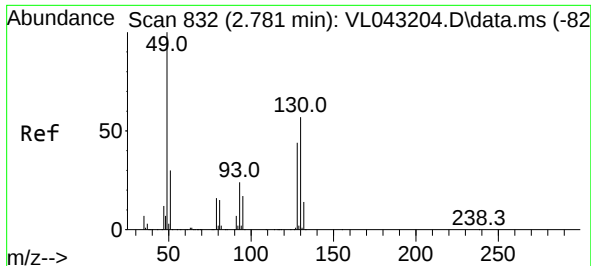
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.800	49	129385	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	3.975	114	319493	10.000	ppbv	0.03
55) Chlorobenzene-d5	8.894	117	240844	10.000	ppbv	0.02
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.387	95	164486	9.317	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.200%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.505	85	8737	0.479	ppbv	92
4) Chloromethane	1.538	50	3568	0.523	ppbv	100
9) Propene	1.492	41	5856	0.768	ppbv #	1
11) Trichlorofluoromethane	2.149	101	1125	0.064	ppbv	89
12) 1,1,2-Trichlorotrifluo...	2.149	101	1125	0.082	ppbv	88
13) Ethanol	1.729	45	17353	6.475	ppbv	91
15) Acetone	1.845	43	52693	2.931	ppbv	96
16) 1,3-Butadiene	1.606	39	1229	0.153	ppbv #	79
19) Isopropyl Alcohol	1.894	45	9219	0.908	ppbv #	1
20) Methylene Chloride	2.072	84	6113	0.401	ppbv	93
21) Allyl Chloride	2.088	41	587	0.049	ppbv #	59
23) Vinyl Acetate	2.486	43	4468	0.206	ppbv #	37
25) Ethyl Acetate	2.842	43	4064	0.105	ppbv #	68
26) Hexane	2.842	57	1935	0.114	ppbv #	46
29) Chloroform	2.861	83	835	0.035	ppbv	91
34) 2-Butanone	2.567	43	3982	0.177	ppbv #	89
35) Carbon Tetrachloride	3.781	117	1924	0.079	ppbv	88
36) Benzene	3.671	78	5666	0.185	ppbv #	84
39) 1,2-Dichloropropane	3.975	63	80880	7.222	ppbv #	23
44) 2,2,4-Trimethylpentane	4.661	57	1909	0.036	ppbv #	1
53) Toluene	6.952	91	6745	0.186	ppbv	93
58) Ethyl Benzene	9.370	91	1749	0.038	ppbv #	73

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quant Time: Dec 03 00:07:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Nov 19 01:11:25 2025
Response via : Initial Calibration

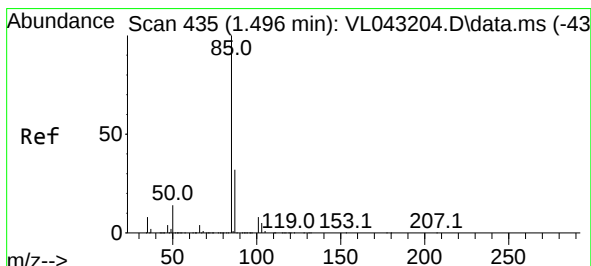
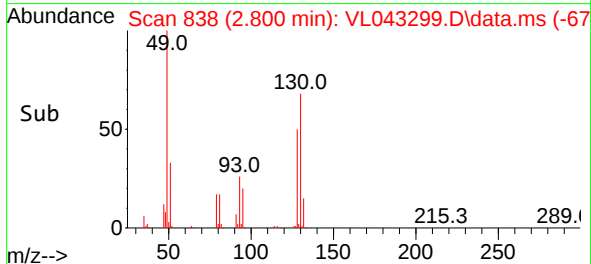
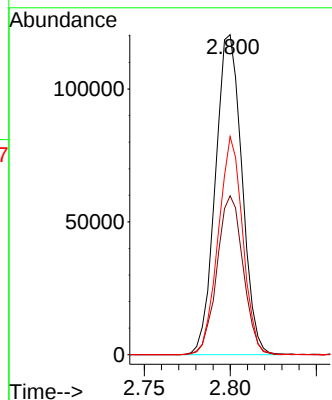
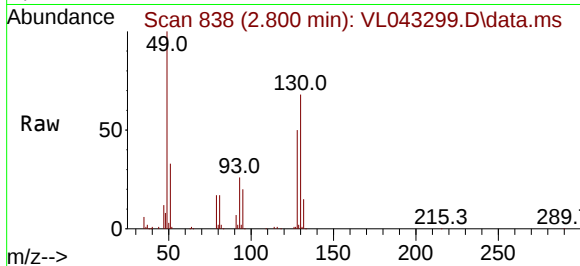




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.800 min Scan# 832
Delta R.T. 0.019 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

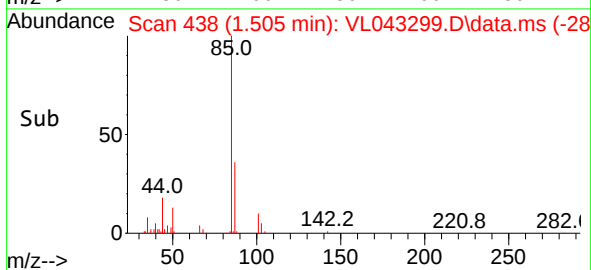
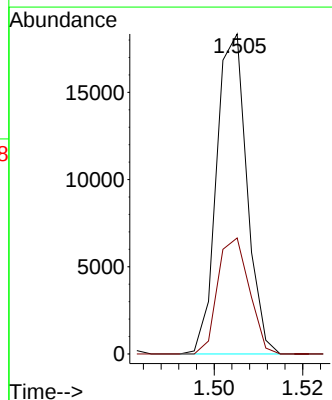
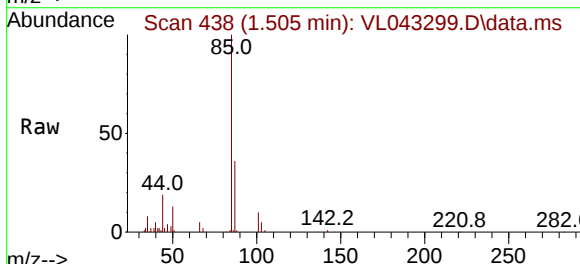
Instrument :
MSVOA_L
ClientSampleId :
OA1

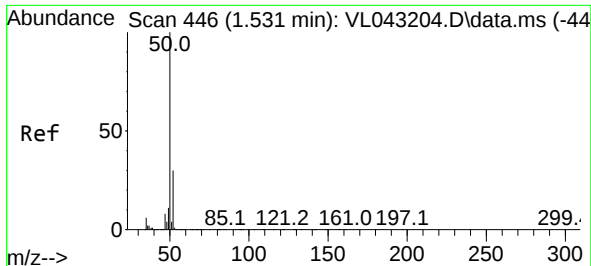
Tgt Ion: 49 Resp: 129385
Ion Ratio Lower Upper
49 100
128 48.9 23.0 69.0
130 62.8 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.479 ppbv
RT: 1.505 min Scan# 438
Delta R.T. 0.009 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 85 Resp: 8737
Ion Ratio Lower Upper
85 100
87 36.2 25.4 38.2

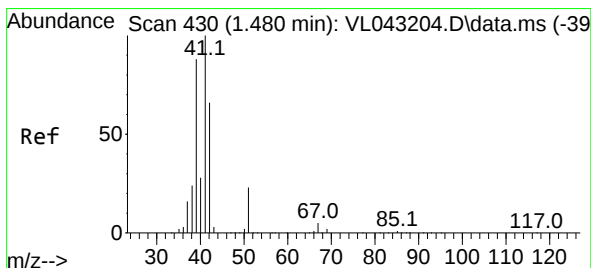
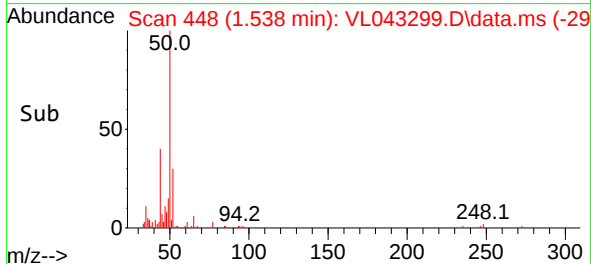
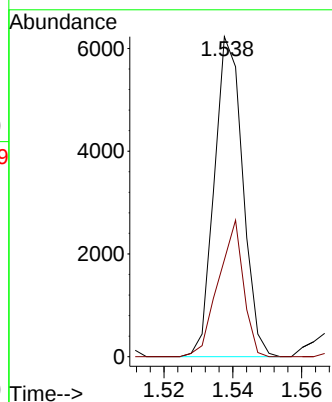
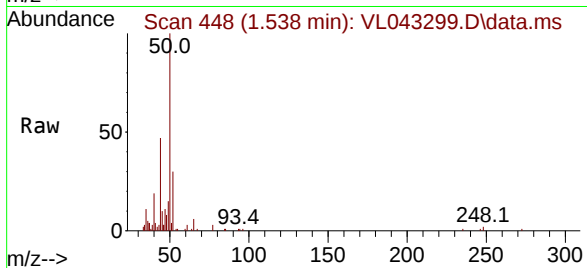




#4
Chloromethane
Concen: 0.523 ppbv
RT: 1.538 min Scan# 448
Delta R.T. 0.006 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

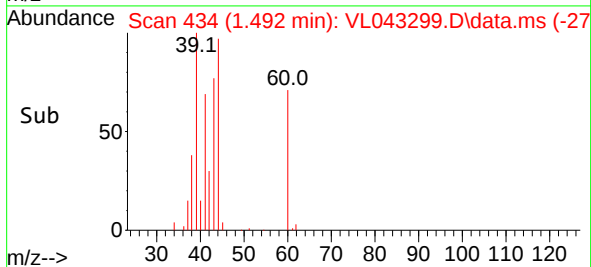
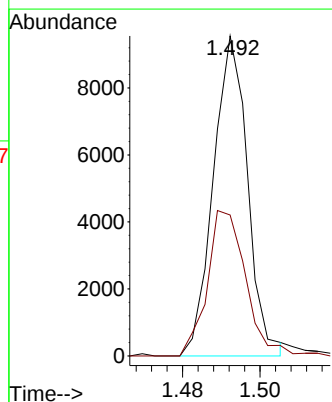
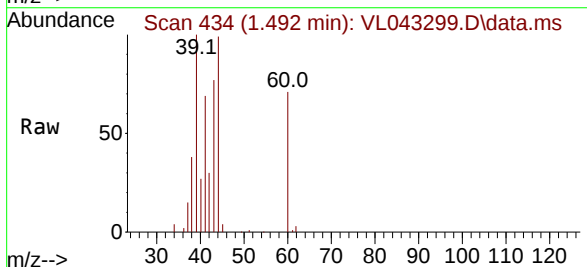
Instrument :
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ClientSampleId :
OA1

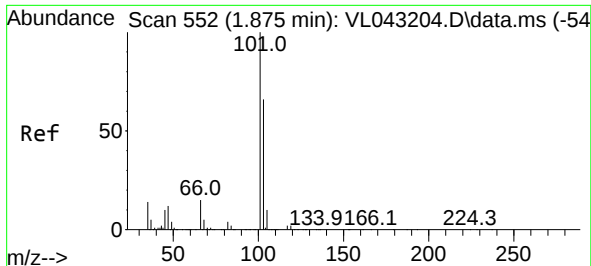
Tgt Ion: 50 Resp: 3568
Ion Ratio Lower Upper
50 100
52 30.2 24.1 36.1



#9
Propene
Concen: 0.768 ppbv
RT: 1.492 min Scan# 434
Delta R.T. 0.013 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 41 Resp: 5856
Ion Ratio Lower Upper
41 100
42 51.0 3.7 5.5#

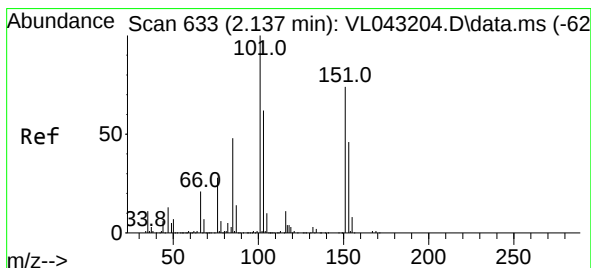
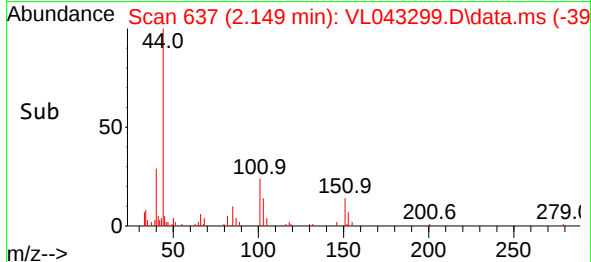
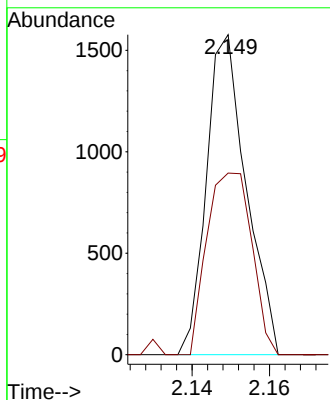
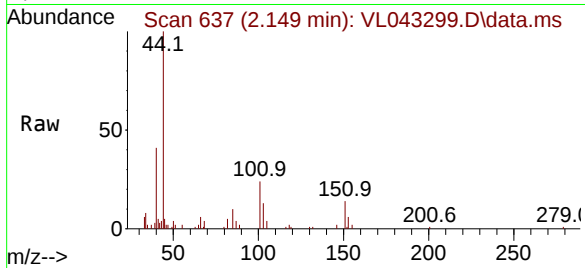




#11
 Trichlorofluoromethane
 Concen: 0.064 ppbv
 RT: 2.149 min Scan# 61
 Delta R.T. 0.275 min
 Lab File: VL043299.D
 Acq: 02 Dec 2025 15:24

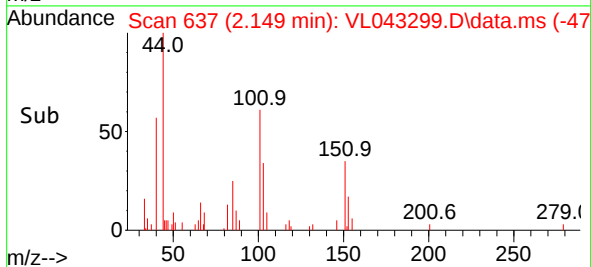
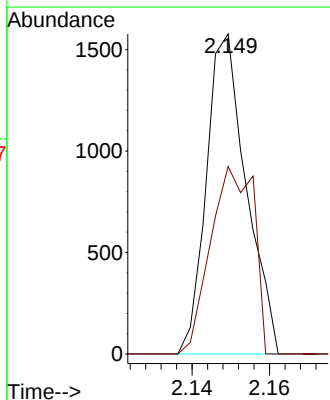
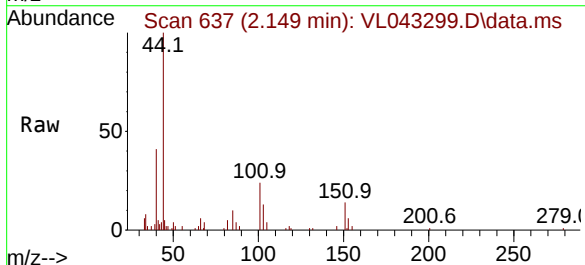
Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

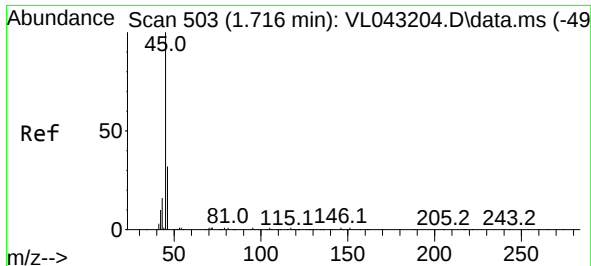
Tgt Ion:101 Resp: 1125
 Ion Ratio Lower Upper
 101 100
 103 56.8 52.6 79.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.082 ppbv
 RT: 2.149 min Scan# 637
 Delta R.T. 0.013 min
 Lab File: VL043299.D
 Acq: 02 Dec 2025 15:24

Tgt Ion:101 Resp: 1125
 Ion Ratio Lower Upper
 101 100
 151 63.7 59.2 88.8

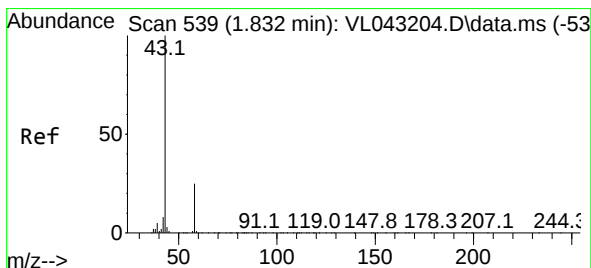
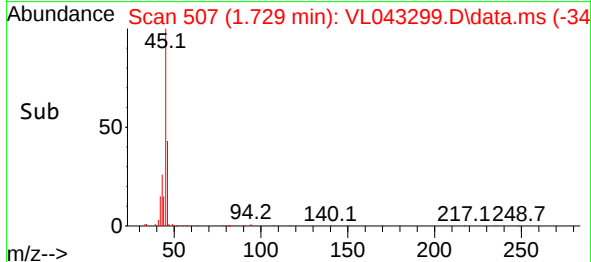
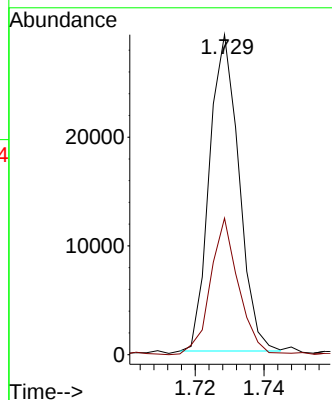
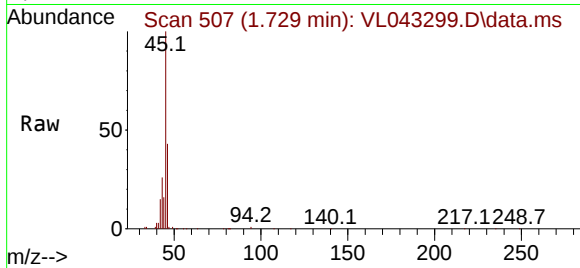




#13
Ethanol
Concen: 6.475 ppbv
RT: 1.729 min Scan# 503
Delta R.T. 0.013 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

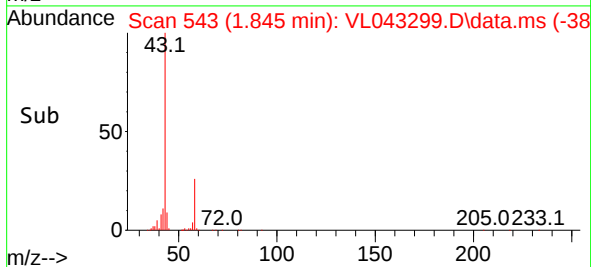
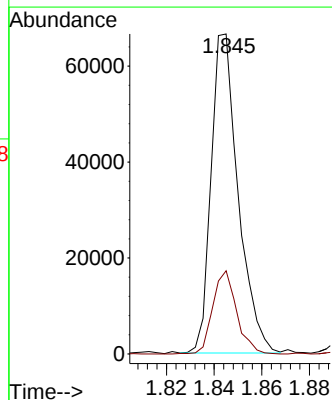
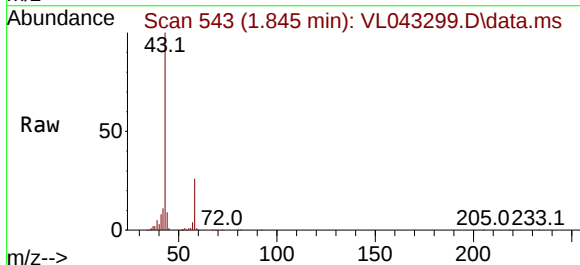
Instrument :
MSVOA_L
ClientSampleId :
OA1

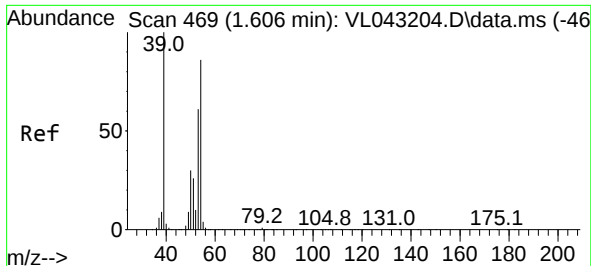
Tgt Ion: 45 Resp: 17353
Ion Ratio Lower Upper
45 100
46 42.8 15.0 59.8



#15
Acetone
Concen: 2.931 ppbv
RT: 1.845 min Scan# 543
Delta R.T. 0.013 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 43 Resp: 52693
Ion Ratio Lower Upper
43 100
58 23.7 20.7 31.1

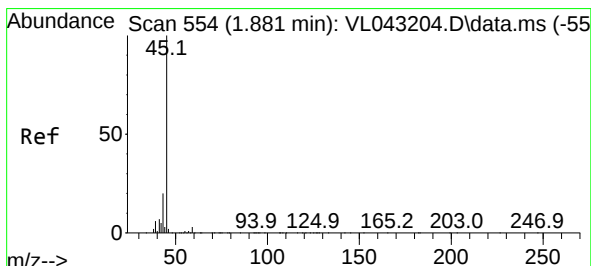
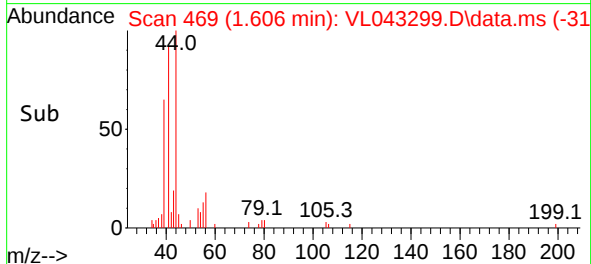
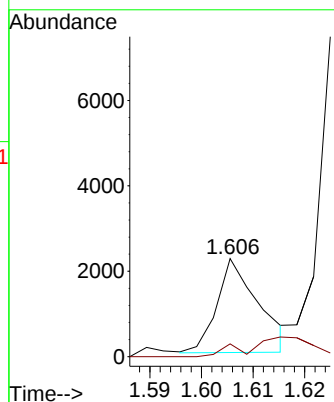
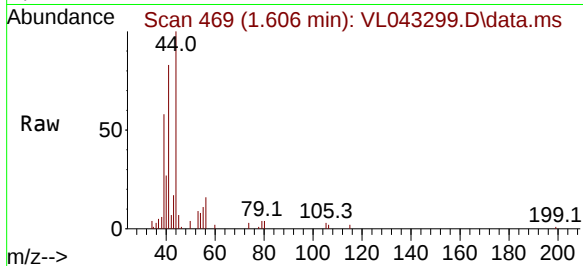




#16
1,3-Butadiene
Concen: 0.153 ppbv
RT: 1.606 min Scan# 41
Delta R.T. -0.000 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

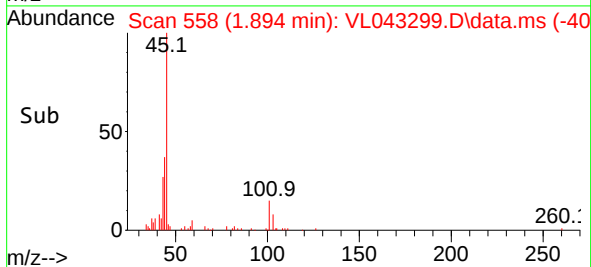
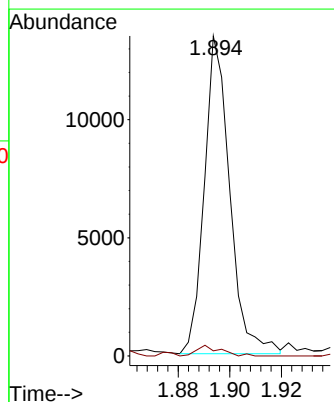
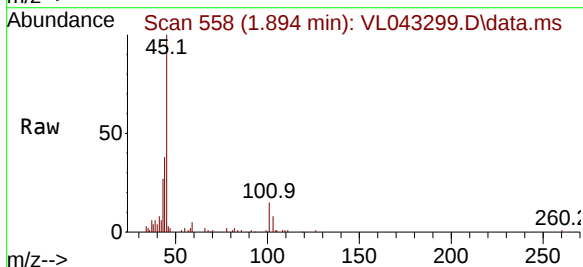
Instrument :
MSVOA_L
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OA1

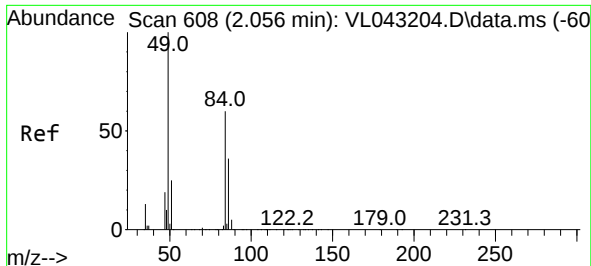
Tgt Ion: 39 Resp: 1229
Ion Ratio Lower Upper
39 100
54 56.2 59.4 89.2#



#19
Isopropyl Alcohol
Concen: 0.908 ppbv
RT: 1.894 min Scan# 558
Delta R.T. 0.013 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 45 Resp: 9219
Ion Ratio Lower Upper
45 100
58 131.8 31.3 46.9#

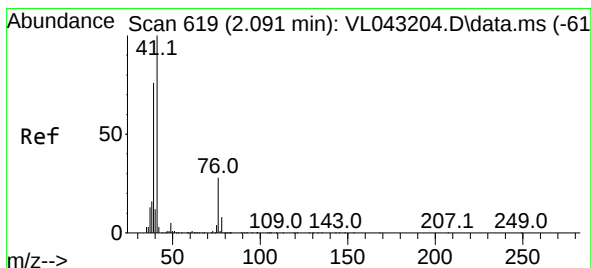
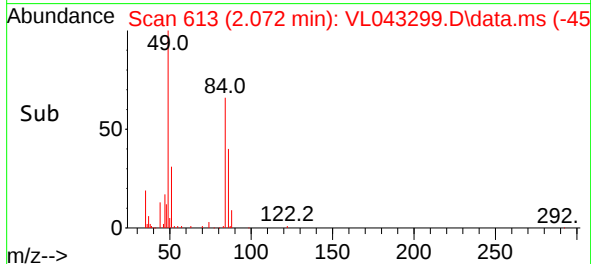
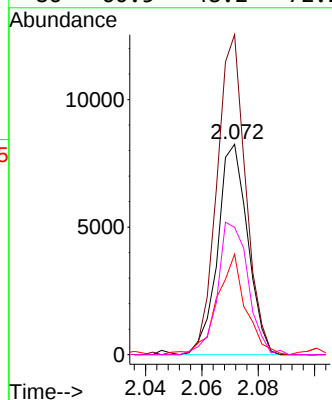
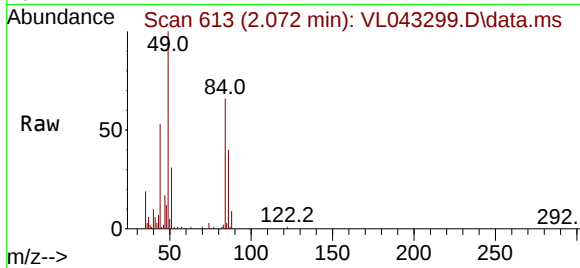




#20
Methylene Chloride
Concen: 0.401 ppbv
RT: 2.072 min Scan# 613
Delta R.T. 0.016 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

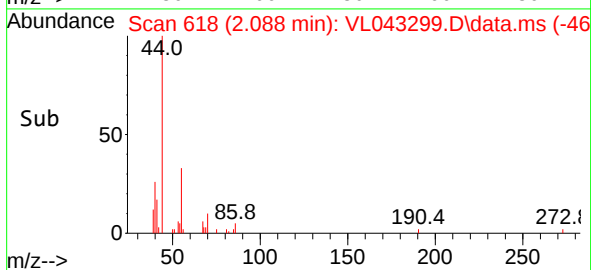
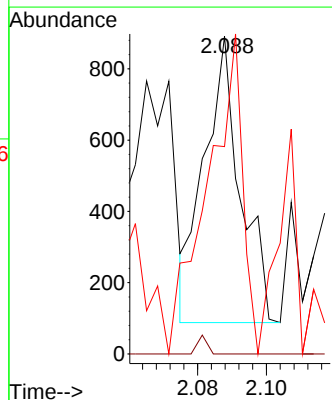
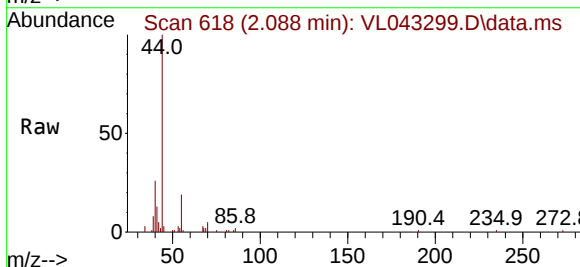
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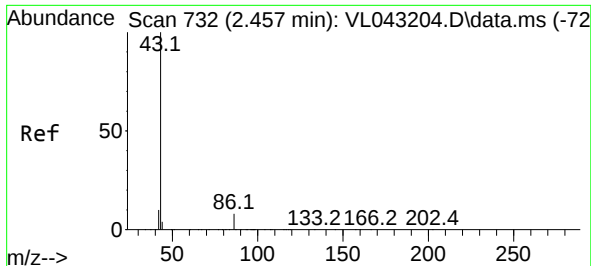
Tgt Ion: 84 Resp: 6113
Ion Ratio Lower Upper
84 100
49 152.1 132.9 199.3
51 47.0 34.8 52.2
86 60.5 48.2 72.2



#21
Allyl Chloride
Concen: 0.049 ppbv
RT: 2.088 min Scan# 618
Delta R.T. -0.004 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 41 Resp: 587
Ion Ratio Lower Upper
41 100
76 0.0 22.1 33.1#
39 108.0 61.0 91.4#

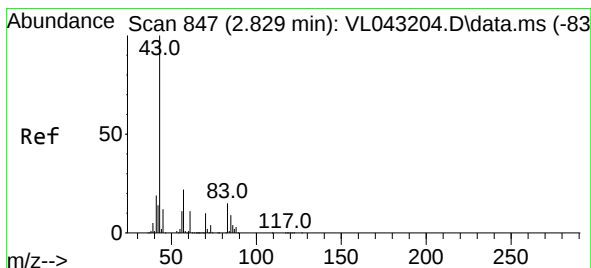
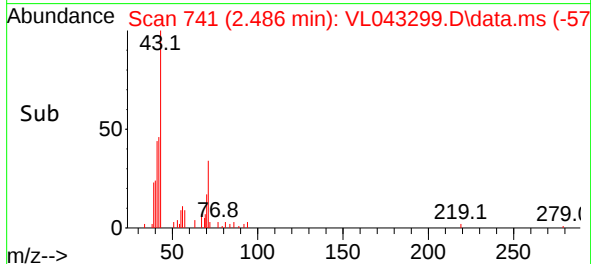
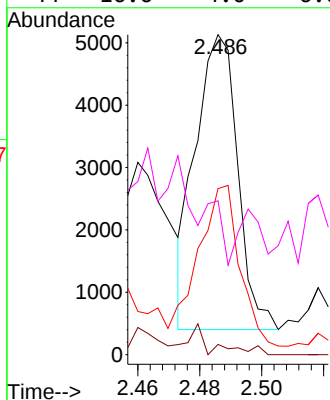
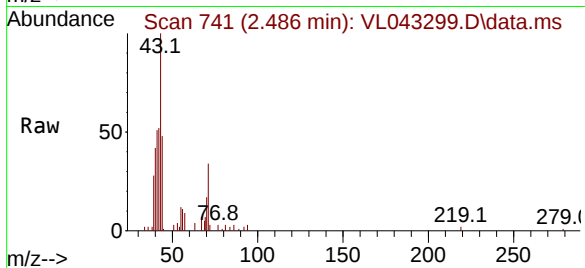




#23
 Vinyl Acetate
 Concen: 0.206 ppbv
 RT: 2.486 min Scan# 741
 Delta R.T. 0.029 min
 Lab File: VL043299.D
 Acq: 02 Dec 2025 15:24

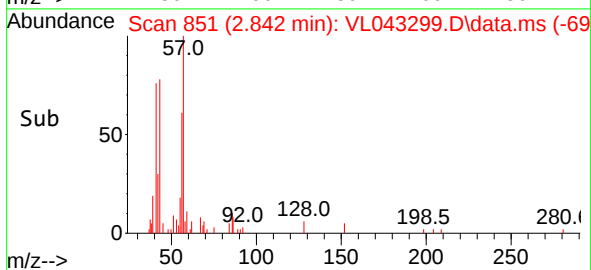
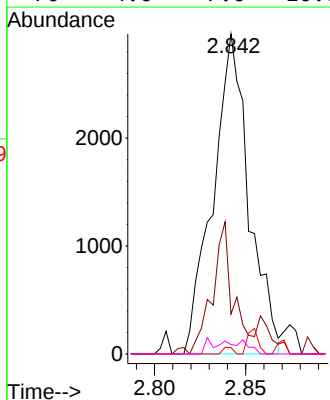
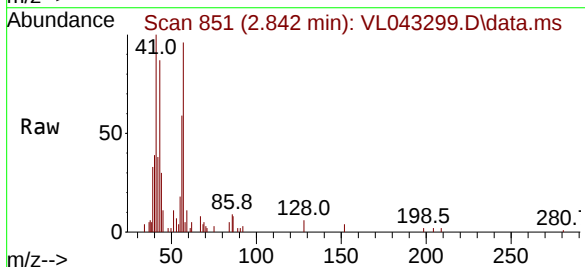
Instrument :
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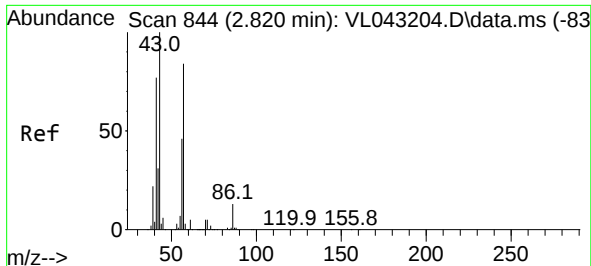
Tgt Ion:	43	Resp:	4468
Ion	Ratio	Lower	Upper
43	100		
86	3.5	6.2	9.2#
42	53.4	8.0	12.0#
44	16.6	4.0	6.0#



#25
 Ethyl Acetate
 Concen: 0.105 ppbv
 RT: 2.842 min Scan# 851
 Delta R.T. 0.013 min
 Lab File: VL043299.D
 Acq: 02 Dec 2025 15:24

Tgt Ion:	43	Resp:	4064
Ion	Ratio	Lower	Upper
43	100		
45	30.3	8.1	12.1#
61	0.0	7.0	10.4#
70	4.0	7.0	10.6#

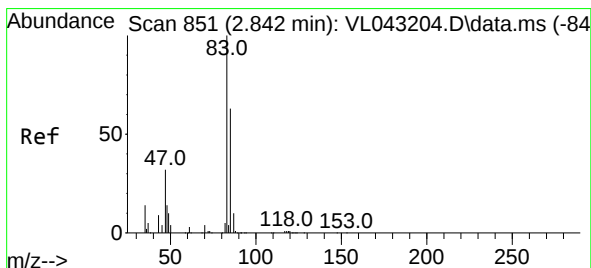
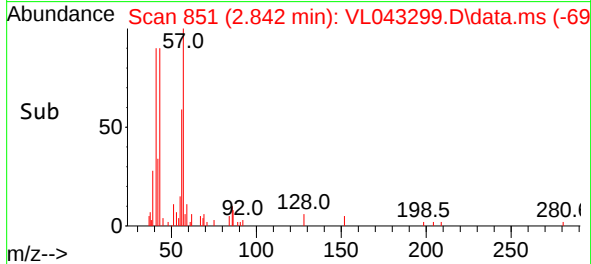
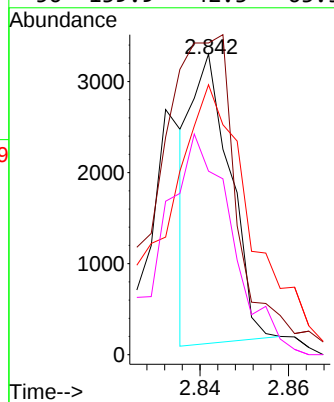
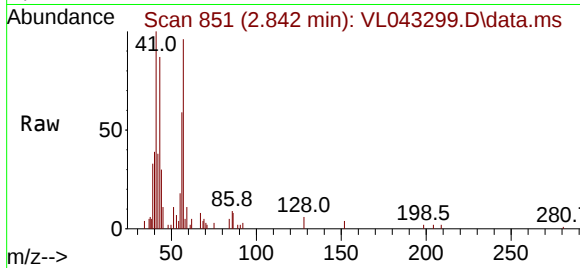




#26
Hexane
Concen: 0.114 ppbv
RT: 2.842 min Scan# 81
Delta R.T. 0.022 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

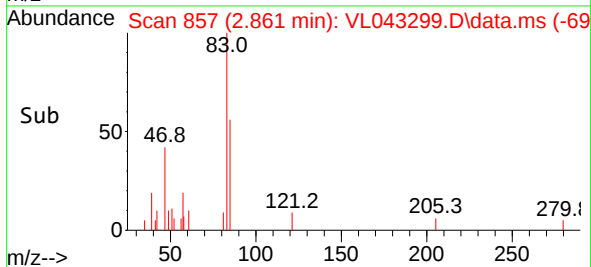
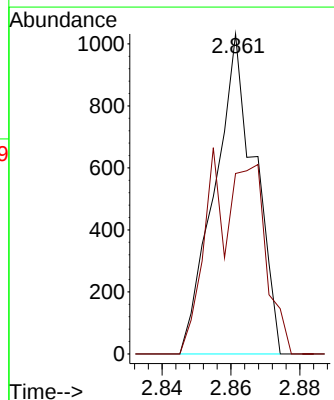
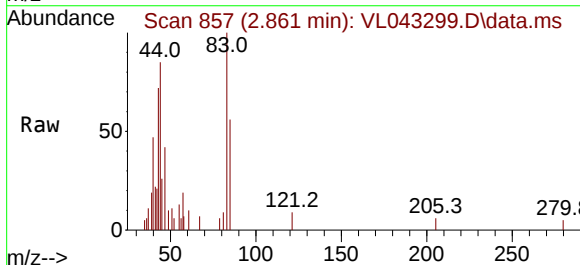
Instrument :
MSVOA_L
ClientSampleId :
OA1

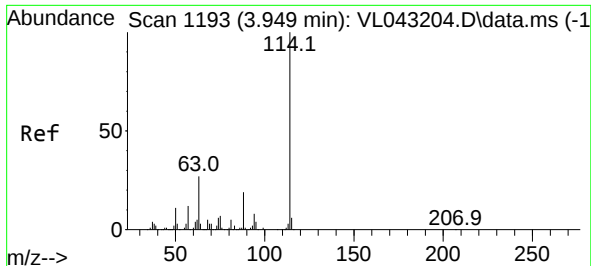
Tgt Ion: 57 Resp: 1935
Ion Ratio Lower Upper
57 100
41 226.1 74.6 111.8#
43 219.7 179.0 268.4
56 139.9 42.3 63.5#



#29
Chloroform
Concen: 0.035 ppbv
RT: 2.861 min Scan# 857
Delta R.T. 0.019 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 83 Resp: 835
Ion Ratio Lower Upper
83 100
85 56.4 50.5 75.7





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.975 min Scan# 1193

Delta R.T. 0.026 min

Lab File: VL043299.D

Acq: 02 Dec 2025 15:24

Instrument :

MSVOA_L

ClientSampleId :

OA1

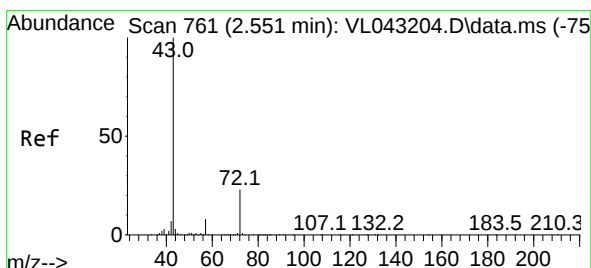
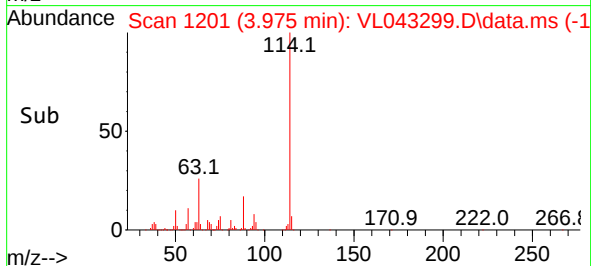
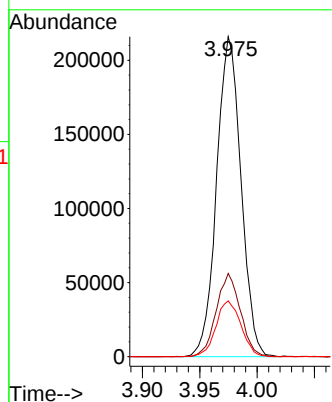
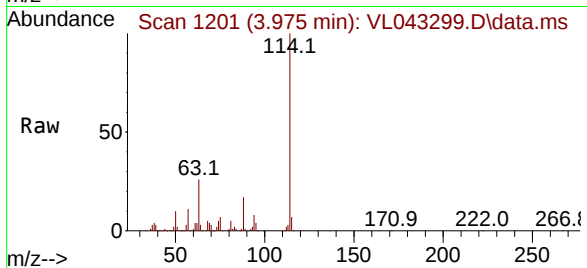
Tgt Ion:114 Resp: 319493

Ion Ratio Lower Upper

114 100

63 25.8 21.0 31.6

88 17.9 14.9 22.3



#34

2-Butanone

Concen: 0.177 ppbv

RT: 2.567 min Scan# 766

Delta R.T. 0.016 min

Lab File: VL043299.D

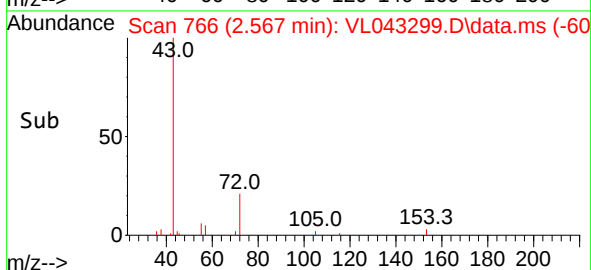
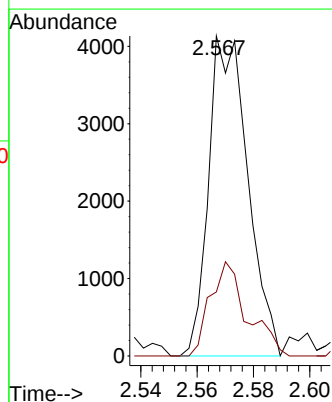
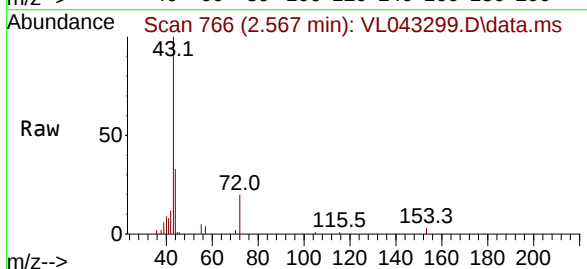
Acq: 02 Dec 2025 15:24

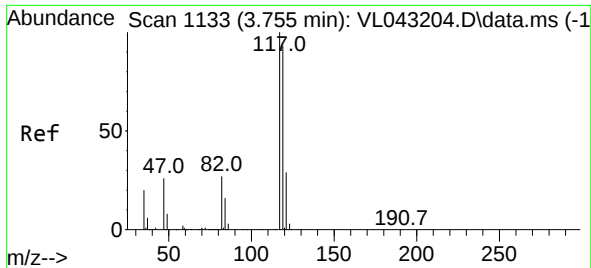
Tgt Ion: 43 Resp: 3982

Ion Ratio Lower Upper

43 100

72 27.7 18.1 27.1#

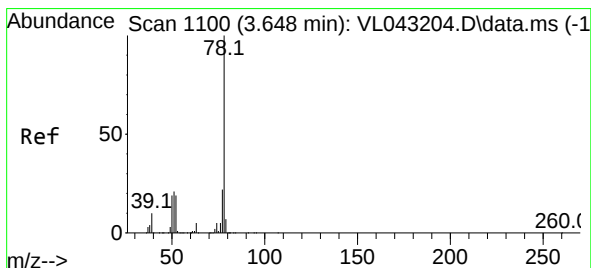
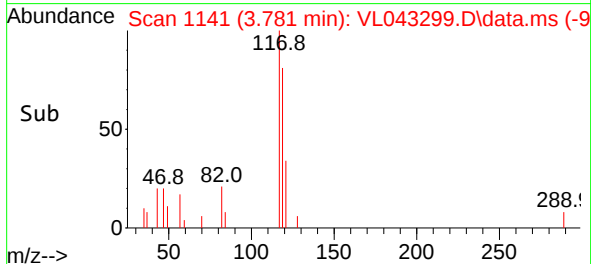
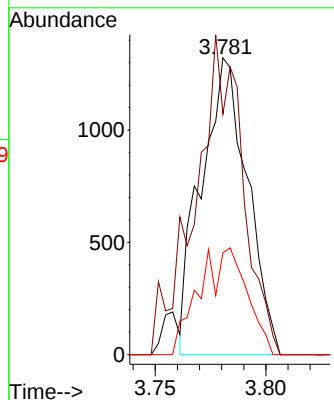
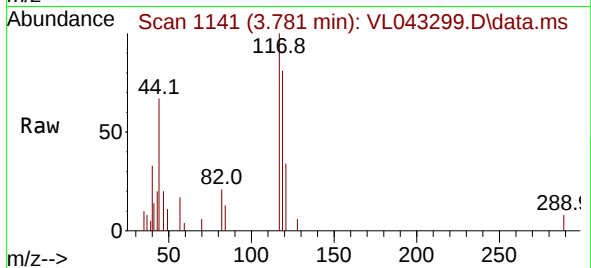




#35
Carbon Tetrachloride
Concen: 0.079 ppbv
RT: 3.781 min Scan# 1133
Delta R.T. 0.026 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

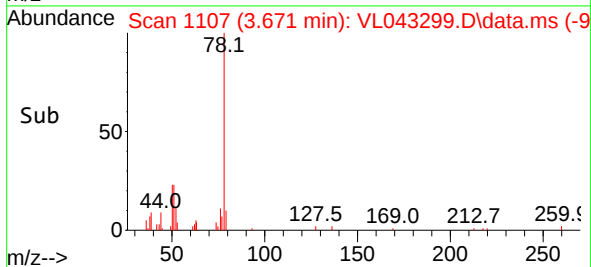
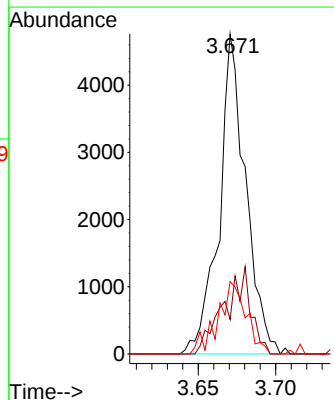
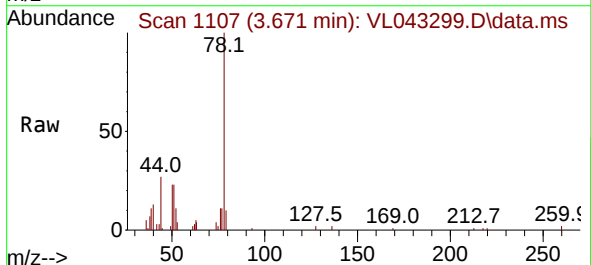
Instrument :
MSVOA_L
ClientSampleId :
OA1

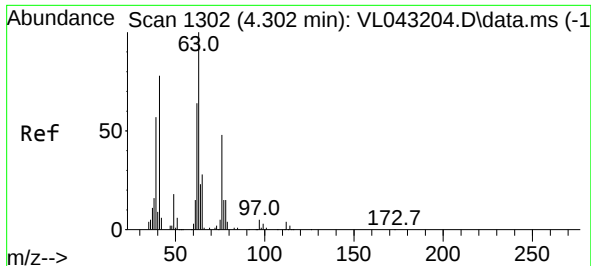
Tgt Ion:117 Resp: 1924
Ion Ratio Lower Upper
117 100
119 81.0 74.6 112.0
121 34.3 23.2 34.8



#36
Benzene
Concen: 0.185 ppbv
RT: 3.671 min Scan# 1107
Delta R.T. 0.022 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 78 Resp: 5666
Ion Ratio Lower Upper
78 100
77 10.7 17.5 26.3#
50 22.6 15.5 23.3





#39

1,2-Dichloropropane

Concen: 7.222 ppbv

RT: 3.975 min Scan# 11

Delta R.T. -0.327 min

Lab File: VL043299.D

Acq: 02 Dec 2025 15:24

Instrument :

MSVOA_L

ClientSampleId :

OA1

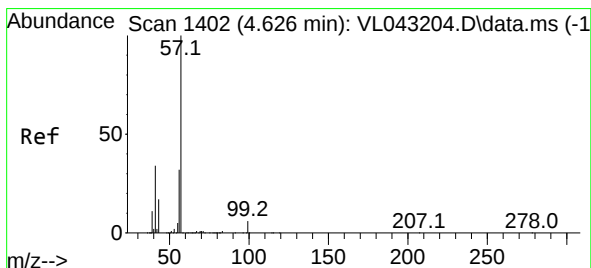
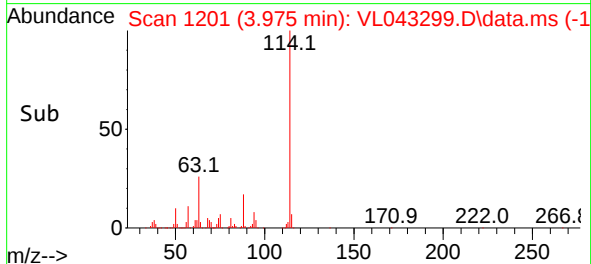
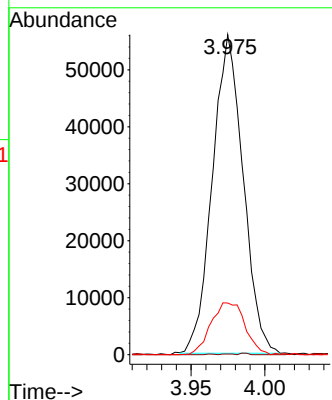
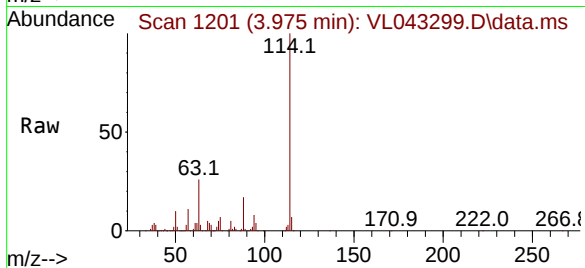
Tgt Ion: 63 Resp: 80880

Ion Ratio Lower Upper

63 100

41 0.2 62.6 93.8#

62 16.3 51.0 76.6#



#44

2,2,4-Trimethylpentane

Concen: 0.036 ppbv

RT: 4.661 min Scan# 1413

Delta R.T. 0.035 min

Lab File: VL043299.D

Acq: 02 Dec 2025 15:24

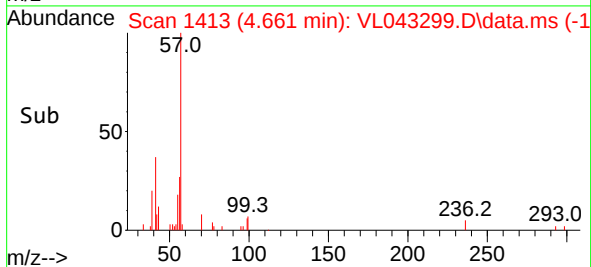
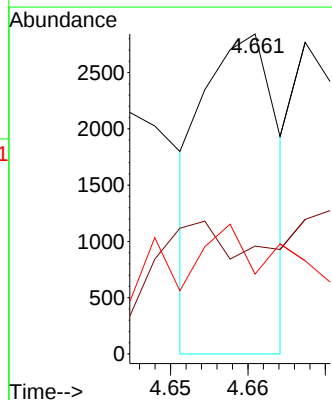
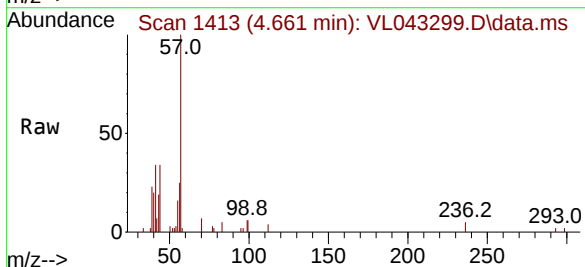
Tgt Ion: 57 Resp: 1909

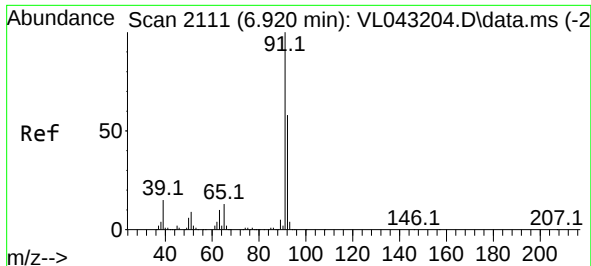
Ion Ratio Lower Upper

57 100

41 0.0 28.0 42.0#

56 125.8 25.6 38.4#

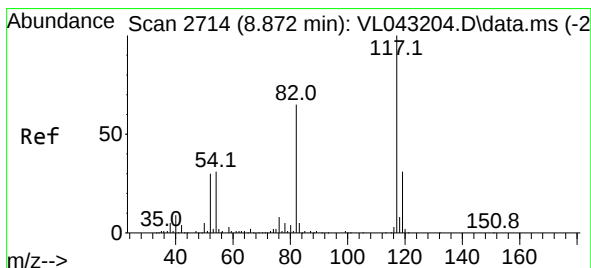
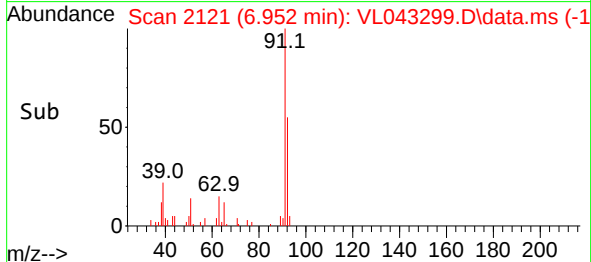
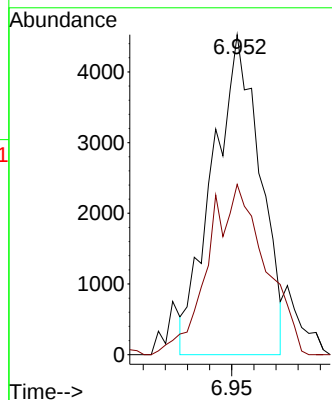
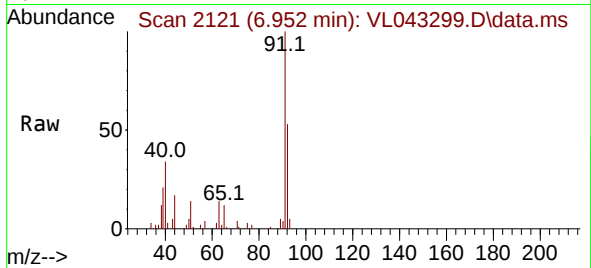




#53
Toluene
Concen: 0.186 ppbv
RT: 6.952 min Scan# 2111
Delta R.T. 0.032 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

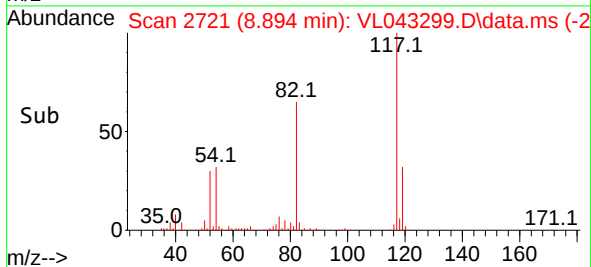
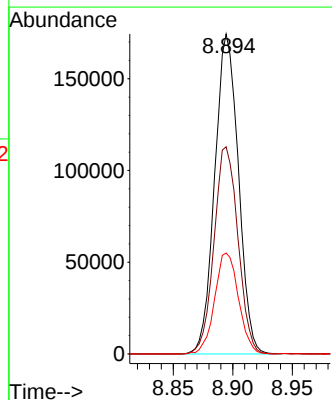
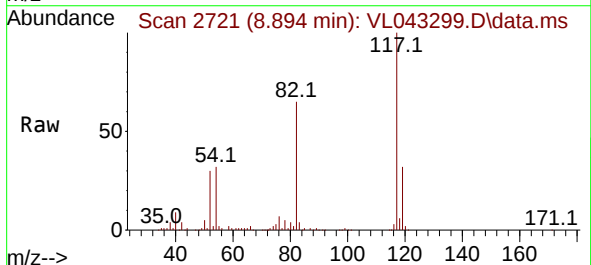
Instrument :
MSVOA_L
ClientSampleId :
OA1

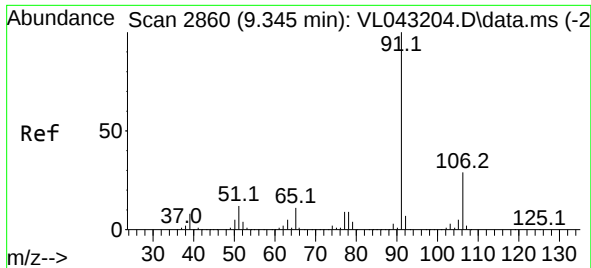
Tgt Ion: 91 Resp: 6745
Ion Ratio Lower Upper
91 100
92 64.2 47.4 71.0



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.894 min Scan# 2721
Delta R.T. 0.022 min
Lab File: VL043299.D
Acq: 02 Dec 2025 15:24

Tgt Ion: 117 Resp: 240844
Ion Ratio Lower Upper
117 100
82 65.6 56.1 84.1
119 32.0 25.0 37.6

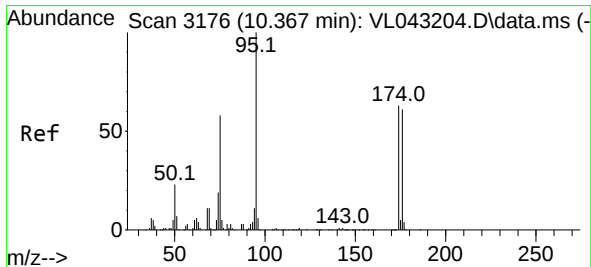
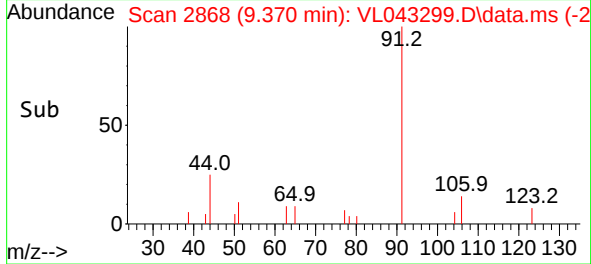
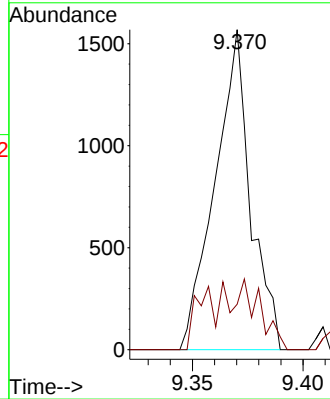
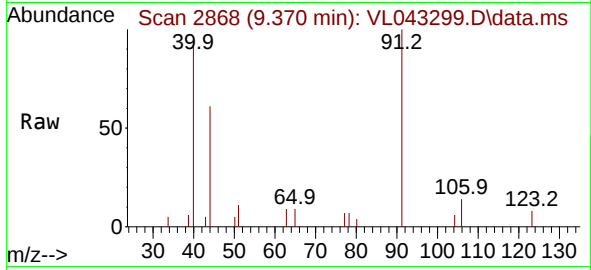




#58
 Ethyl Benzene
 Concen: 0.038 ppbv
 RT: 9.370 min Scan# 21
 Delta R.T. 0.026 min
 Lab File: VL043299.D
 Acq: 02 Dec 2025 15:24

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Tgt Ion: 91 Resp: 1749
 Ion Ratio Lower Upper
 91 100
 106 14.2 22.8 34.2#



#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.317 ppbv
 RT: 10.387 min Scan# 3182
 Delta R.T. 0.019 min
 Lab File: VL043299.D
 Acq: 02 Dec 2025 15:24

Tgt Ion: 95 Resp: 164486
 Ion Ratio Lower Upper
 95 100
 174 67.9 50.2 75.2
 175 5.0 4.1 6.1

